

Appln No.: 10/062,700
Arndt dated: November 28, 2005
Reply to Final Rejection of July 27, 2005

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1. (currently amended) A method to determine a physical connectivity configuration of at least a portion of a network when the physical connectivity configuration is unknown, the method comprising:

- receiving status information relating to nodes in the portion of the network whose unknown physical connectivity configuration is to be determined;
- determining, for the nodes, respective labels that indicate one or more virtual connections traversing the nodes based on the status information;
- identifying at least one link between a subset of the nodes based on the respective labels; and
- determining the physical connectivity configuration of the portion of the network based on the at least one link.

Claim 2. (original) The method of claim 1, wherein receiving status information comprises:

- receiving management information base parameters from the nodes.

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Claim 3. (original) The method of claim 2, wherein receiving the management information base parameters comprises receiving a virtual path identifier for each of the one or more virtual connections.

Claim 4. (original) The method of claim 2, wherein receiving the management information base parameters comprises receiving virtual channel identifier information for each of the one or more virtual connections.

Claim 5. (original) The method of claim 1, wherein determining respective labels that indicate one or more virtual connections traversing the nodes comprises determining one or more identifiers for each of the one or more virtual connections.

Claim 6. (currently amended) The method of claim 5, wherein ~~determining~~ identifying at least one link between ~~the~~ a subset of the nodes comprises determining the subset of nodes having the same one or more identifiers.

Claim 7. (original) The method of claim 5, wherein determining one or more identifiers comprises determining a virtual path identifier for each of the one or more virtual connections.

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Claim 8. (currently amended) The method of claim ~~7~~ 5, wherein determining one or more identifiers comprises determining a virtual channel identifier for each of the one or more virtual connections.

Claim 9. (original) The method of claim 1, wherein determining respective labels that indicate one or more virtual connections traversing the nodes comprises:
determining a number of the virtual connections traversing the nodes; and
determining respective cardinalities of the nodes based on the number of the virtual connections.

Claim 10. (original) The method of claim 9, wherein determining at least one link between the subset of the nodes comprises determining the subset of nodes having the same cardinality.

Claim 11. (original) The method of claim 10, further comprising receiving additional status information when the subset of nodes exceeds a threshold number of nodes.

Claim 12. (original) The method of claim 11, wherein the threshold number of nodes is 2.

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Claim 13. (currently amended) An apparatus to determine a physical connectivity configuration of at least a portion of a network when the physical connectivity configuration is unknown, comprising:

means for receiving status information relating to nodes in at least a portion of a network whose unknown physical connectivity configuration is to be determined;

means for determining respective labels for the nodes that indicate one or more virtual connections traversing the nodes based on the status information;

means for identifying at least one link between a subset of the nodes based on the respective labels; and

means for determining a physical connectivity configuration of the portion of the network based on the at least one link.

Claim 14. (currently amended) The apparatus of claim 13, wherein the means for receiving status information comprises:

means for receiving management information base parameters relating to the ~~plurality of~~ nodes.

Claim 15. (currently amended) The apparatus of claim 14, wherein the means for receiving the management information base parameters comprises means for receiving a virtual path identifier for each of the one or more virtual connections.

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Claim 16. (original) The apparatus of claim 14, wherein the means for receiving the management information base parameters comprises means for receiving virtual channel identifier information for each of the one or more virtual connections.

Claim 17. (original) The apparatus of claim 13, wherein the means for determining respective labels that indicate one or more virtual connections traversing the nodes comprises means for determining one or more identifiers for each of the one or more virtual connections.

Claim 18. (currently amended) The apparatus of claim 17, wherein the means for ~~determining~~ identifying at least one link between ~~the~~ a subset of the nodes comprises means for determining the subset of nodes having the same one or more identifiers.

Claim 19. (original) The apparatus of claim 17, wherein the means for determining one or more identifiers comprises means for determining a virtual path identifier for each of the one or more virtual connections.

Claim 20. (original) The apparatus of claim 17, wherein the means for determining one or more identifiers comprises means for determining a virtual channel identifier for each of the one or more virtual connections.

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Claim 21. (original) The apparatus of claim 13, wherein the means for determining respective labels that indicate one or more virtual connections traversing the nodes comprises:

means for determining a number of the virtual connections traversing the nodes; and

means for determining respective cardinalities of the nodes based on the number of the virtual connections.

Claim 22. (original) The apparatus of claim 21, wherein the means for determining at least one link between the subset of the nodes comprises means for determining the subset of nodes having the same cardinality

Claim 23. (original) The apparatus of claim 22, further comprising means for receiving additional status information when the subset of nodes exceeds a threshold number of nodes.

Claim 24. (original) The apparatus of claim 23, wherein the threshold number of nodes is 2.

Claim 25. (currently amended) A method for determining a physical connectivity configuration of a node in a network, the method comprising the steps of:
receiving status information relating to ~~the~~ a node in a network and at least one additional node in the network;

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determining respective labels that indicate one or more virtual connections
traversing the node based on the status information;
identifying at least one link between the node and the at least one
additional node based on the respective labels; and
determining a physical connectivity configuration of the node based on the
at least one link.

Claim 26. (currently amended) An apparatus for determining a physical
connectivity configuration of a node in a network, comprising:
means for receiving status information relating to a node in a network and
at least one additional node in the network;
means for determining respective labels that indicate one or more virtual
connections traversing the node based on the status information;
means for identifying at least one link between the node and the at least
one additional node based on the respective labels; and
means for determining a physical connectivity configuration of the node
based on the at least one link.